

XXI. *Descriptions of new Coleoptera from Madagascar belonging to the Melolonthidæ.* By CHARLES O. WATERHOUSE.

[Read August 2nd, 1882.]

THE species described in this paper are mostly from various collections recently received at the British Museum from Madagascar. The genera of *Melolonthidæ* are somewhat unsatisfactory, and I have therefore refrained from proposing new genera, except in one case. The species which I have described as *Encya variegata* and *E. cribrata* are allied to *Encya ornatipennis*, Blanchard, and all these species depart from the definition of the genus in having more than four lamellæ to the club of the antennæ. *E. ornatipennis*, male, has the club composed of five lamellæ; *E. cribrata*, male, six lamellæ; and *E. variegata*, male, seven lamellæ. The species which I have described as *Lepidiota pygidialis* differs from all the species of the genus in the acute prolongation of the apex of the pygidium; but, having regard to the mixed group of species now included in the genus *Lepidiota*, I have not deemed it advisable to separate this species generically, as that would be better done by any one monographing the family.

MELOLONTHIDÆ.

RHIZOTROGINÆ.

ENARIA, *Er.*

In Lacordaire's 'Genera des Coléoptères' the club of the antennæ is said to be three-jointed, but a note is added to the effect that all the specimens examined were females. The specimen described below as *E. marginata* is a male, and of *E. depressiuscula* there are both sexes. The males differ from the females in having the club of the antennæ composed of four leaflets, which are very distinctly longer than those of the female; the 7th joint,

however, is not so much produced as the 8th, 9th, and 10th. The fringe of spines at the apex of the posterior tibiæ is more developed in the female than in the male.*

Enaria latifrons, n. s.

Oblongo-ovata, convexa, flavo-testacea, nitida; capite grosse punctato, thorace longitudine duplo latiori antice paulo angustiori, lateribus leviter arcuatis crenulatis, margine antico leviter bisinuato, dorso sat crebre grosse punctato, scutello evidenter punctato, elytris grosse crebre punctatis, pygidio confertim grosse punctato, abdomine sat crebre grosse punctato. ♀. Long. 7 lin.

Hab. Madagascar.

Enaria marginata, n. s.

Elongato-ovata, flavo-testacea, nitida; capite piceo grosse punctato, thorace piceo, lateribus flavescentibus, scutello lævi, piceo, elytris marginibus calloque humerali piceis, pygidio crebre grosse punctato, abdomine medio hic et illic puncto impresso, latera versus crebre fortiter punctato, tibiæ apicibus tarsisque piceis. ♂. Long. 8 lin.

Hab. Fianarantsoa (*Shaw*).

In the British Museum there are two species of *Enaria*, which I have briefly described above, evidently closely allied to *E. rufofulva*, Fairmaire (Ann. Fr., 1880, p. 327), but I cannot reconcile either of them with it.

E. latifrons is nearly uniform in colour, but the head is a little darker yellow. The front margin of the thorax is slightly sinuate on each side of the middle; in which it differs from *E. marginata*, which has it straight. The punctures are rather large and deep, and not very close together. *E. latifrons* has the posterior angles completely rounded off; in *E. marginata* there is a slight

* The important difference in the development of the apex of the posterior tibiæ in the *Melolonthidæ* appears almost to be overlooked by Lacordaire. The females have the apex more enlarged than in the males, accompanied by a greater development of the spines and spurs. This is very observable in the common *Melolontha vulgaris*, but in some of the larger *Lepidiota* the difference is very great. Under *Ancylonycha* Lacordaire says, "Jambes postérieures évasées au bout surtout chez les femelles," the only mention of this character which has come under my notice.

angulation. The elytra in *E. marginata* are a little longer than in *E. latifrons*, but the punctuation is similar. The pygidium in both species is very strongly punctured; in *E. latifrons* the punctures are crowded together, whilst in *E. marginata* the punctures are distinctly separated, and in places there is room for punctures of the same size in the intervals. *E. marginata* has the abdomen with a very few punctures in the middle; in *E. latifrons* the punctuation is nearly equally strong and close throughout.

Enaria depressiuscula, n. s.

Elongato-oblonga, subparallela, sat convexa, nitida, flava; capite thoraceque rufo-flavis discrete punctatis, elytris dorsim depressiusculis, evidentiter crebrius punctatis. Long. $8\frac{1}{2}$ lin.

This species is relatively longer than any of the others, more parallel, and has the elytra flattened above; the suture is, however, raised, as is usual in the genus. The head and clypeus are strongly, but not very closely, punctured. The thorax is gradually, but not very, much narrowed from the base to the front angles, gently arcuate at the sides; the punctures are strong and rather distant from each other. The scutellum is distinctly and not very thickly punctured. The elytra are very little enlarged posteriorly, subparallel, the punctuation is strong, and a little closer than on the thorax; the suture posteriorly and the margins are most narrowly tinted with dark brown.

Hab. Antananarivo (*Kingdon*); Fianarantsoa (*Cowan*).

Encya calva, n. s

Oblonga, flavo-testacea, calva, nitida; capite thoraceque (lateribus exceptis) piceis, crebre punctatis, scutello piceo, lævi, elytris minus nitidis crebre punctatis, macula ante apicem piceo nitido. Long. 7 lin., lat. $4\frac{1}{2}$ lin.

Head thickly and moderately strongly punctured, the punctures clearly separated from each other; the clypeus scarcely emarginate. Thorax evenly convex, pitchy, with the sides yellowish, thickly and very distinctly punctured, the punctures clearly separated from each other; broadest close to the base, narrowed anteriorly from about the middle, the margins not crenulate; the

base oblique on each side, but very slightly lobed in the middle. The elytra are not very convex, very little enlarged posteriorly. The surface is rather uneven, closely but irregularly punctured, slightly rugulose in parts, with more or less numerous small, irregular, shining, brown marks; below the subapical callosity is a rather large, brown, transverse spot. Pygidium very thickly and strongly punctured. The sternum is clothed with long yellow pubescence. The abdomen is nearly smooth in the middle, but is rather thickly punctured at the sides; with very sparse and extremely fine pubescence.

Hab. Fianarantsoa (*Cowan*).

Encya pyriformis, n. s.

Pyriformis, sat convexa, brunnea, parum nitida, dense rugoso-punctata, squamis setiformibus flavo-griseis vestita, squamisque majoribus hic et illic albidis; corpore subtus dense griseo-albo pubescenti. ♀. Long. $12\frac{1}{2}$ lin., lat. (postice), $7\frac{1}{2}$ lin.

Clypeus very short, but not quite so short as in the foregoing species, the emargination occupying about one-third the length. Thorax very broad behind, very obliquely narrowed in front, not very convex, closely and coarsely punctured, but the punctures are not so crowded as in *E. gutticollis*. Elytra at the base the same width as the base of the thorax, gradually becoming broader for two-thirds the length, and then obtusely rounded off; the greatest width is to the width of the base as 3 to 2; the shoulders and the subapical callosities are scarcely prominent, the latter marked by a small smooth spot below; the punctuation is very close and strong, and the narrow elevated shining intervals are confluent transversely. The setiform scales are very acute, evenly distributed over the surface, and not so dense as in the foregoing species. The sternum is clothed with moderately long soft pubescence; the abdomen with setiform scales, which are a trifle shorter and less narrow than those on the elytra.

Encya gutticollis, n. s.

Elongato-oblonga, subparallela, convexa, fusca, dense rugulosa, brevissime griseo-pilosa, subopaca; thorace guttis duabus albidis ornato, elytris postice parum lati-

oribus, brunneis, guttis parvis numerosis elevatis piceis nitidis, et squamis setiformibus albidis. Long. $10\frac{1}{2}$ lin., lat. $5\frac{1}{2}$ lin.

This species is closely allied to the preceding, but it is more parallel in form, more coarsely rugulose throughout, except on the head, where the rugulose sculpture is replaced by close, strong punctuation. The clypeus is extremely short, so that the anterior emargination reaches half-way to the posterior carina. The thorax is very densely rugose-punctate, all the raised intervals shining; on the disk, a little in front of the middle, are two white spots composed of scale-like hairs; and here and there are simple, very narrow, acuminate scales. The scutellum is densely punctured, distinctly smaller than in the foregoing species, and more equilateral. The elytra are brown, with numerous small, irregular raised, smooth, pitchy spots. Besides the fine yellowish grey hairs, with which the surface is not very densely clothed, there are narrow whitish scales, which appear to range themselves in three or four lines. The subapical callosity is scarcely prominent (but is marked by one of the small smooth spots); it is not more than one line distant from the apex, *i. e.*, much closer to the margin than in *E. invulnerata*. The abdomen is clothed with greyish pubescence.

Encya invulnerata, n. s.

Oblongo-ovata, antice paulo angustata, brunnea, dense rugulosa, brevissime flavo-pilosa, opaca; thorace guttis duabus parvis flavis ornato, elytris guttis nonnullis piceis nitidis notatis. Long. 12 lin., lat. 7 lin.

The head is densely and moderately finely rugulose; the front margin of the clypeus is triangularly emarginate. The thorax is very convex, densely rugulose (perhaps a little more finely so than the head), obliquely narrowed anteriorly from rather behind the middle; the anterior angles scarcely prominent; the sides crenulate, slightly angular a little way from the base; the base with a medial lobe. On the disk, near the front margin, are two small spots formed of whitish scales. Scutellum densely rugulose. Elytra at the base scarcely wider than the thorax, considerably wider posteriorly, deflexed at the apex; densely rugulose, the suture slightly raised

and shining (but rugose) to near the subapical callosity; here and there are small, irregular raised, shining spots.

Hab. Antananarivo (*Shaw*).

Encya variegata, n. s.

Elongato-ovata, convexa, nitida, picea, subtus testacea; thorace minus crebre punctato, lateribus testaceis, elytris flavo-testaceis crebre sat fortiter punctatis, guttis numerosis irregularibus parum elevatis piceis. ♂, ♀. Long. $7\frac{1}{2}$ lin., lat. $3\frac{3}{4}$ lin.

This species much resembles *E. ornatipennis*, Bl., but differs from the specimens so named in having the thorax more rounded at the sides posteriorly, so that the posterior angles are much more obtuse, in fact almost rounded off; the punctuation is much less close, and the sides are margined with pale yellow. The scutellum is smooth in the male example, but has a very few punctures in the female. The elytra are pale yellow, strongly and closely punctured, but not so rugose as in *E. ornatipennis*; the smooth brown markings have a tendency to unite transversely, but in places seem to indicate longitudinal, interrupted costæ. The two teeth on the anterior tibiæ are small as compared with *E. ornatipennis*. The abdomen has no scales, but has some short, very fine, pubescence; the punctures are rather strong, and not close together.

The male has the first joint of the antennæ moderately elongate; the second is short; the third has its inner apical angle produced into a process which is as long as the length of the joint; the six* apical joints form a rather long, scarcely curved, club.

The female has the third joint long and slender; the fourth joint is almost half the length of the third; the fifth is strongly transverse and wider; the sixth is still wider and very transverse; the four apical joints forming an ovate club.

Hab. Antananarivo (*Shaw*).

* The apical joint is divided at its apex, showing that it is a malformation, the ninth and tenth joints having grown together. The specimen unfortunately has lost the other antenna. The club would, doubtless, consist of seven joints.

Encya cribrata, n. s.

Præcedenti affinis, sed paulo latior, picea, confertim ruguloso-punctata; abdomine creberrime punctato, squamulis angustissimis pallidis tecto. ♂. Long. 9 lin., late $4\frac{3}{4}$ lin.

Uniform dark brown. Head and clypeus very strongly and very closely punctured. Thorax much narrowed in front, not much narrowed at the base, the sides rounded behind the middle; punctuation strong and very much crowded. Scutellum very thickly punctured. Elytra densely punctured, but the punctures are of unequal size; here and there are small, irregular, smooth intervals. Abdomen rather thickly and moderately strongly punctured; clothed with pale short setæ, or extremely narrow scales. Basal joint of the antennæ long; the second very short; the third distinctly longer than the second; the fourth about as broad at the apex as long, with a slight angular projection on the inner side; the six apical joints forming a rather long straight club.

EUTRICHESES, n. g.

Clypeus very transverse, separated from the forehead by a well-marked carina. Third and fourth joints of the antennæ subequal; the club small, ovate, composed of three lamellæ. Mesosternum without intercoxal process. Anterior tibiæ with two strong teeth. Metathoracic parapleuræ long and narrow. Claws furnished beneath in the middle with a strong tooth.

I propose this genus for some species of large size, with the body clothed with a mixture of shorter and very long hair. Although the large size of the species would lead one to look for these insects among true *Melolonthidæ*, they should certainly, on account of the narrow parapleura, be placed with the *Rhizotroginæ*, near *Schizonycha*.

It appears to me that *Tricholepis*, Blanch., which Lacordaire "has no hesitation in uniting with" *Lepidiota*, would be better transferred to the *Rhizotroginæ*, on account of the narrow metathoracic parapleuræ. *Melolontha lactea*, Gory, *Leucopholis lepidota*, Klug, *Melolontha grandis*, Cast., and *Lepidiota Savagei*, Hope, are *Melolonthidæ*, and must for the present be put in the magazine genus *Lepidiota*, and not under *Tricholepis*, as in Gemminger and v. Harold's Catalogue. *Enthora* has narrow

metathoracic parapleuræ, and should be placed with *Encya*, among the *Rhizotroginae*.

Eutrichesis punctatus, n. s.

Elongatus, subparallelus, convexus, crassus, castaneus, pallide-pilosus et longe fulvo-hirtus; capite thoraceque fuscis, opacis, rugosis, elytris nitidis crebre fortiter punctatis, corpore subtus majis testaceo fulvo-piloso, abdomine medio calvo. Long. 20 lin., lat. $10\frac{1}{2}$ lin.

Head and clypeus closely and very coarsely punctured; the clypeus very short, the triangular emargination of the front margin reaching half-way to the posterior carina. Thorax broad, twice as broad as long, closely and very coarsely punctured, with an irregular smooth median line; the greatest width is a little before the base, but it is only very slightly narrower at the base; the sides are crenulate; the base is broadly but not much lobed in the middle. The scutellum is fuscous, transverse, and triangular, very coarsely punctured. Elytra at the base as wide as the thorax, a little narrowed below the shoulders, and then slightly enlarged posteriorly, obtusely rounded at the apex, somewhat flattened on the back, but with the suture raised for a little more than two-thirds the length; rather closely punctured with irregular-shaped strong punctures; each puncture bearing a stiff yellowish-white decumbent hair or seta. On each side of the suture the sculpture is finer and more confused. The humeral callosity is smooth; there is no subapical callosity. The pygidium is semicircular, gently convex; very densely and finely rugosely punctured, opaque, except the margin, where the sculpture is coarser and the surface more shining. The two strong external teeth on the anterior tibiæ are blackish. The abdomen is shining, with rather large distant punctures; the apex and margins closely punctured. The shorter pubescence which clothes the upper surface of the insect is fine on the thorax, and becomes coarser as it approaches the apex of the elytra. The long, erect, fulvous hair is especially observable on the sides and tibiæ.

Hab. Fianarantsoa (*Cowan*).

Eutrichesis pilosicollis, n. s.

Elongatus, parallelus, castaneus, subtus testaceus; capite fusco, confertim fortiter punctato, thorace convexo, fusco-castaneo, confertim ruguloso-punctato et subtiliter flavo-piloso pilis longis intermixtis, antice perparum angustato, lateribus arcuatis crenulatis, elytris parallelis crebre fortiter punctatis, pallide pilosis. Long. 14 lin., lat. 7 lin.

This species is close to the preceding, but differs in having the thorax relatively a little broader, and unusually little narrowed anteriorly. The clypeus is less emarginate. The punctuation of the thorax is finer and more even, and there is no smooth median line; the pubescence is finer and closer. The pygidium is more triangular in outline and less rugosely punctured. The punctures on the middle portion of the abdomen are finer, and the basal segment is finely and rather thickly punctured all over.

Hab. Antananarivo (Toy).

Eutrichesis placidus, n. s.

Brunneus, subtus testaceus, crebre punctatus, pallide pilosus; capite infuscato, thorace crebre fortiter punctato, elytris postice paulo amplioribus, abdomine crebre punctato. Long. 14½ lin., lat. 7½ lin.

This species differs from the foregoing in being less parallel in form, the thorax being more narrowed in front, and the elytra more enlarged posteriorly. The clypeus is formed as in *E. pilosicollis*, but the head is rather more confusedly punctured. The punctuation of the thorax is rather strong, but, although the punctures are very close together, they are distinct from each other, and not confused as they are in both the preceding species. The scutellum is more finely and more sparingly punctured. The elytra are relatively shorter; the sculpture is very similar. The pygidium is rather more semi-circular in outline than in *E. pilosicollis*. The abdomen is rather thickly and comparatively finely punctured, very closely so at the sides; the middle of the second segment and middle of the third segment (the margin excepted) sparingly punctured; the pubescence very fine.

Hab. Antananarivo (Kingdon).

MELOLONTHINÆ.

Lepidiota pygidialis, n. s.

Ovalis, sat convexa, nitida, fusca; capite thoraceque fortiter punctatis, punctis squamuliferis, elytris testaceis sat fortiter punctatis, calvis, pygidio planato, creberrime punctato, apice longe acuminato paulo reflexo fere lævi, abdomine piceo crebre punctulato, breviter pallide piloso. Long. 12 lin.

Elongate-ovate, moderately convex, the elytra without costæ. The head and thorax are strongly punctured; the punctures are clearly defined, close together on the front of the head and sides of the thorax, well separated on the disk of the thorax; each bearing a small round whitish scale. The thorax obliquely narrowed in front from considerably in front of the middle; the sides posteriorly very gently sinuous. Scutellum a curvilinear, equilateral triangle, with a few strong punctures. The elytra are yellowish testaceous, with the margins below the shoulders brown; the punctuation is moderately strong, not very close. The form of the pygidium is remarkable. It is rather flat, thickly punctured (the punctures having a tendency to unite longitudinally), finely margined; the apex is prolonged into an acute process, which makes a very obtuse angle with the body of the pygidium; the process is smooth, except some punctures along its margins. The anterior tibiæ have two short teeth. The third joint of the antennæ is scarcely longer than the fourth.

Hab. Antananarivo (*Shaw*); Fianarantsoa (*Cowan*).